REMARKS

In the Office Action of May 25, 2005, claims 1-22 are pending. Claims 17-22 stand allowed. Applicant recognizes the allowability of claims 4-14 if rewritten in independent form to include all of the limitations of the base claim and any intervening claims. However, Applicant believes that independent claim 1 is allowable in view of the relied upon references referred to in the Office Action and thus also believes that claims 4-14, which depend therefrom are also allowable as originally drafted.

Claim 1 stands rejected under 35 U.S.C. 102(b) as being anticipated by Starkey et al. (U.S. Pat. No. 3,751,166).

Claim 1 recites the limitations of a thermal sensor thermally coupled to a light source and generating a light source temperature signal. A control circuit is coupled to a cooling assembly and to the thermal sensor. The control circuit operates the cooling device when the light source temperature signal is above a minimum temperature limit.

The Office Action states that Starkey discloses the stated limitations. Applicant, respectfully, traverses. The Office Action refers to Figure 1, col. 2, lines 8-28, 46-54, and 62-67, and col. 3, lines 18-33 in reliance on disclosure of the above stated limitations. Applicant submits that nowhere in the stated sections or anywhere else in Starkey is a thermal sensor, the generation of a light source temperature signal, a control circuit coupled to a thermal sensor, or a control circuit operating a cooling device when the light source temperature signal is above a minimum temperature limit disclosed, taught, or suggested.

In Figure 1, Starkey discloses the coupling of a laser array to a cryogenic cooler. In col. 2, lines 8-10, Starkey states that the laser array is positioned for cooling to cryogenic temperatures of approximately 77°K by the cryogenic cooler. In col. 2, lines 11-28, Starkey speaks to other electronic circuitry unrelated to the cooler or to the temperature of the laser array. Specifically, Starkey describes the laser array drive circuitry for pulsing the array and the electronics utilized to gate the night vision device. In col. 2, lines 46-54, Starkey discloses range derivation

and display electronics for the measuring of elapsed time between the occurrences of two pulses. This is also unrelated to the operation of the cooler and the temperature of the laser array.

In col. 2, lines 62-67, Starkey states that the narrow spectral bandwidth of the optical output of the laser diodes permits maximum filtering of any unwanted background illumination. This is also unrelated. Starkey also states that the laser diode is cooled to enhance the average output power capability and to shift the spectral output wavelength. The cooling lowers input current requirements. The ability to enhance the average output power capability, to shift the spectral output wavelength, and to reduce input current requirements is also does not speak to whether a temperature sensor is used, whether the temperature of the laser diodes is monitored, or whether the cryogenic cooler is operated in response to a temperature signal. The cryogenic cooler, as described in Starkey simply cools the laser array to cryogenic temperatures. In doing so, one is not necessarily checking the temperature of the laser array or performing a task in response to that temperature. For example, the general operating temperature of the laser array may be previously understood. The cryogenic cooler may be pre-configured, selected, or set to cool the laser array with that understanding in mind and may never be adjusted, which appears to be the case in Starkey.

In col. 3, lines 18-33, Starkey again speaks to the pulsing period and gating frequency, which are unrelated to the operating temperature of the laser array in that they do not provide the temperature of the laser array. In the stated section, Starkey also discloses the coupling between the transistors in the array driver, which is also unrelated.

Starkey merely provides a cooling device for a laser array. Starkey does not describe the internals or the operation of the cooling device. As stated, nowhere in Starkey is a temperature sensor disclosed or suggested, let alone the operation thereof or the tasks performed in response thereto.

In order for a reference to anticipate a claim the reference must teach or suggest each and every element of that claim, see MPEP 2131 and *Verdegaal Bros. V. Union Oil Co. of California*, 814 F.2d 628. Thus, since each and every element of claim 1 is not taught or suggested by Starkey, Applicants submit that claim 1 is novel, nonobvious, and is in a condition for allowance.

Claims 2-3 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Starkey in view of Zhan et al. (U.S. Pub. No. 2004/0170017 A1).

Applicant submits that since claims 2-3 depend from claim 1, that they are also novel, nonobvious, and are in a condition for allowance for at least the same reasons.

Note from the Office Action it is not clear whether claims 15-16 stand rejected in view of Starkey under 35 U.S.C. 102(b) or in view of Starkey and Zhan under 35 U.S.C. 103(a). Nevertheless, since claims 15-16 depend from allowable claim 1, that they too are novel, nonobvious, and are in a condition for allowance for at least the same reasons.

With respect to claim 15, the Office Action states that Starkey discloses a control circuit comprising a drive circuit to activate a cooling device. Note that claim 15 recites a control circuit that comprises a fan drive circuit. A fan drive circuit is clearly not disclosed by Starkey, especially since it is agreed that Starkey fails to disclose a fan.

With respect to claim 16, the Office Action states that the claimed limitations are disclosed in col. 3, lines 3-12, of Starkey. Applicant traverses. In col. 3, lines 3-12, Starkey states that the cryogenic cooler allows the laser array to operate at high powers and enhances the output wavelength of the array. Starkey provides an example of a cooler that may be used. Starkey also states that the cooled laser array has low current requirements and thus modulation is obtainable using completely transistorized circuitry. The ability to operate at high powers and to use transistorized circuitry for the output of a laser array is also completely unrelated to whether a temperature sensor is utilized or whether tasks are performed in response to the output of the sensor. In the stated section,

Starkey is speaking to the output of the laser array not to the operating temperature of the laser array.

Also and with respect to claim 16, Zhan, like Starkey, fails to disclose a fan drive circuit that activates a cooling device when temperature of a light source is greater than a predetermined temperature limit. Starkey fails to disclose any of the stated limitations, other than the use of a cooling device and a light source. Although Zhan discloses a fan and a light source, nowhere in Zhan is the temperature of the LEDs detected nor is any task performed in response to the temperature of the LEDs. Thus, claim 16 is further novel and nonobvious for the above-stated reasons.

Referring to MPEP 706.02(j) and 2143, to establish a *prima facie* case of obviousness the prior art references must teach or suggest all the claim limitations. Thus, since each and every element of claims 2-3 and 15-16 are not taught or suggested by Starkey and Zhan alone or in combination, Applicants submit that claim 2-3 and 15-16 are again novel, nonobvious, and are in a condition for allowance.

In light of the remarks, Applicants submit that all the rejections are now overcome. The application is now in condition for allowance and expeditious notice thereof is earnestly solicited. Should the Examiner have any questions or comments, the Examiner is respectfully requested to call the undersigned attorney.

Respectfully submitted,

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